

Title (en)

NEAR-INFRARED LIGHT ORGANIC SENSORS, EMBEDDED ORGANIC LIGHT EMITTING DIODE PANELS, AND DISPLAY DEVICES INCLUDING THE SAME

Title (de)

ORGANISCHE NAHINFRAROTLICHTSENSOREN, EINGEBETTETE ORGANISCHE LEUCHTDIODENPLATTEN UND ANZEIGEVORRICHTUNGEN DAMIT

Title (fr)

CAPTEURS ORGANIQUES DE LUMIÈRE DANS LE PROCHE INFRAROUGE, PANNEAUX DE DIODES ÉLECTROLUMINESCENTES ORGANIQUES ENCASTRÉS ET DISPOSITIFS D’AFFICHAGE LES CONTENANT

Publication

**EP 3425670 A1 20190109 (EN)**

Application

**EP 18181734 A 20180704**

Priority

KR 20170084947 A 20170704

Abstract (en)

An OLED panel may be embedded with a near-infrared organic photosensor and may be configured to implement biometric recognition without an effect on an aperture ratio of an OLED emitter. The OLED panel may include a substrate, an OLED stack on the substrate and configured to emit visible light, and an NIR light sensor stack on the substrate and including an NIR emitter configured to emit NIR light and an NIR detector. The NIR light sensor stack may be between the substrate and the OLED stack. The OLED panel may be included in one or more various electronic devices.

IPC 8 full level

**H01L 27/32** (2006.01); **G06F 3/042** (2006.01); **G06K 9/00** (2006.01)

CPC (source: CN EP KR US)

**H10K 39/00** (2023.02 - US); **H10K 39/34** (2023.02 - EP); **H10K 50/11** (2023.02 - US); **H10K 50/13** (2023.02 - KR); **H10K 50/19** (2023.02 - KR); **H10K 59/35** (2023.02 - KR US); **H10K 59/351** (2023.02 - EP US); **H10K 59/40** (2023.02 - EP US); **H10K 59/65** (2023.02 - US); **G06F 3/0416** (2013.01 - EP US); **G06V 40/1318** (2022.01 - EP US); **G06V 40/161** (2022.01 - US); **G06V 40/19** (2022.01 - US); **H01L 2031/0344** (2013.01 - US); **H10K 39/32** (2023.02 - EP US); **H10K 39/34** (2023.02 - CN KR)

Citation (applicant)

US 2015331508 A1 20151119 - NHO HYUNWOO HENRY [US], et al

Citation (search report)

- [X] US 2006244693 A1 20061102 - YAMAGUCHI KAZUNORI [JP], et al
- [X] US 2015364527 A1 20151217 - WANG SEONG MIN [KR], et al
- [XD] US 2015331508 A1 20151119 - NHO HYUNWOO HENRY [US], et al
- [I] CN 101887691 A 20101117 - AU OPTRONICS CORP
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EP3809326A4; EP3944329A4; EP3885971A1; US11837015B2; JPWO2020148604A1; WO2020148604A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

**EP 3425670 A1 20190109**; CN 109216421 A 20190115; CN 109216421 B 20231024; JP 2019033071 A 20190228; JP 7245611 B2 20230324; KR 102673640 B1 20240610; KR 20190004678 A 20190114; US 10727285 B2 20200728; US 11469277 B2 20221011; US 2019013368 A1 20190110; US 2020312928 A1 20201001

DOCDB simple family (application)

**EP 18181734 A 20180704**; CN 201810724274 A 20180704; JP 2018127652 A 20180704; KR 20180077793 A 20180704; US 201816027456 A 20180705; US 202016900011 A 20200612